

Application SN 09/678,915
Amendment dated 09/27/2004
Reply to Office Action dated 04/29/2004

Amendment to the claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (Withdrawn): A vending machine service system for transmitting vending data to a vending machine to a service operator, comprising:

monitoring means for monitoring said vending machine, said monitoring means for compiling data on the operation of said machine, providing compiled data comprising machine identification and sales data on the vending machine, said monitoring means further for formatting said compiled data into a data stream;

a transmitter for transmitting said data stream to a reception area, providing a transmission;

a service vehicle situated in said reception area, said service vehicle for conveying an inventory of product for the vending machine, said service vehicle further comprising:

receiver means for receiving said transmission, said receiver further comprising interface means for converting said transmission back to said data stream; and

a portable computer for receiving said data stream, said portable computer further comprising display means for displaying the identification of the vending machine and sales data for the vending machine, so as to enable said service operator to obtain inventory from said service van and convey same to the vending machine, so as to stock said vending machine without a physical inventory of the vending machine.

2. (Withdrawn): The vending machine service system of Claim 1, wherein said compiled data of monitoring means includes data on cash receipts and change requirements for the vending machine, and wherein said display means of said portable computer display displays said data on cash receipts and change requirements.

3. (Withdrawn): The vending machine service system of Claim 2, wherein said compiled data of said monitoring means includes service information on the operational status of the vending machine, and wherein said display means of said portable computer display displays said data on service information for the vending machine.

4. (Withdrawn): The vending machine service system of Claim 3, wherein there is provided second monitoring means for monitoring a second vending machine located a distance from said first vending machine, said second monitoring means for compiling data on the operation of the second vending machine, providing compiled data comprising machine identification and sales data on the second vending machine, said second monitoring means further for formatting said compiled data into a second data stream;

a second transmitter for transmitting said data stream to said reception area, providing a second transmission;

wherein said receiver means further receives said second transmission, said interface means further converts said second transmission to a second data stream; and

said portable computer is provided for receiving said second data stream, said portable computer further comprising display means for displaying the identification of the second vending machine and sales data for the second vending machine, so as to enable said service operator to obtain inventory from said service van and convey same to the second vending machine, so as to

stock said second vending machine without a physical inventory of the second vending machine.

5. (Withdrawn): The vending machine service system of Claim 4, wherein there is provided a third monitoring means for monitoring a third vending machine located a distance from said first and second vending machines, said third monitoring means for compiling data on the operation of the third vending machine, providing compiled data comprising machine identification and sales data on the third vending machine, said third monitoring means further for formatting said compiled data into a third data stream;

a third transmitter for transmitting said data stream to said reception area, providing a third transmission;

wherein said receiver means further receives said third transmission, said interface means further converts said third transmission to a third data stream; and

said portable computer is further provided for receiving said third data stream, said portable computer further comprising display means for displaying the identification of the third vending machine and sales data for the third vending machine, so as to enable said service operator to obtain inventory from said service van and convey same to the third vending machine, so as to stock said second vending machine without a physical inventory of the second vending machine.

6. (Withdrawn): A vending machine service system for transmitting vending data from a vending machine to a service operator, comprising:

monitoring means for monitoring a plurality of vending machines situated at disparate locations relative one another within a local area, said monitoring means comprising individual monitor modules for compiling data on the operation of said plurality of machines, providing compiled data comprising machine identification and sales data on each of said vending machines,

said monitoring means further formatting said compiled data into a data stream;

a transmitter for transmitting said data stream to a reception area, providing a transmission;

a service vehicle situated in said reception area, said service vehicle for conveying an inventory of product for each of said vending machines, said service vehicle further comprising:

receiver means for receiving said transmission, said receiver further comprising

interface means for converting said transmission back to said data stream; and

a portable computer for receiving said data stream, said portable computer further comprising display means for displaying the identification of each of said vending machine and sales data for each of said vending machines, so as to enable said service operator to obtain inventory from said service van and convey same to each of said vending machines, so as to stock said vending machine without a physical inventory of each of said vending machines.

7. (Withdrawn): The vending machine service system of Claim 6, wherein said compiled data of monitoring means includes data on cash receipts and change requirements for each of said vending machines, and wherein said display means of said portable computer display displays said data on cash receipts and change requirements.

8. (Withdrawn): The vending machine service system of Claim 7, wherein said compiled data of said monitoring means includes service information on the operational status of each of said vending machines, and wherein said display means of said portable computer display displays said data on service information for each of said vending machines.

9. (Withdrawn): The vending machine service system of Claim 8, wherein said portable computer further comprises uploading means to upload said data stream to an administrative office and downloading means to download said data stream to said portable computer.

10. (Withdrawn): The vending machine service system of Claim 9, wherein said monitoring means appends to said data stream location information on the location of each of said vending machines, and wherein said display means of said portable computer display displays said location information for each of said vending machines.

11. (Withdrawn): The vending machine service system of Claim 10, wherein there is further provided route indication means associated with said portable computer to utilize said location information to display a preferred route for the service of each of said vending machines.

12. (Currently amended): The method of servicing a plurality of vending machines situated at disparate locations relative to one another within a location area, comprising the steps of:

a) ~~polling each said machine, compiling identification, and updated sales and cash flow data for each machine, providing an updated data stream~~ compiling vending machine data to update sales and cash flow information, providing operational status and machine ID information on each said vending machine, so as to provide a separate, updated data stream for each machine

b) repeatedly transmitting each said updated data stream utilizing monodirectional RF transmission only, via ~~from~~ a separate transmitter associated with ~~located near~~ each said vending machine at predetermined intervals, providing updated transmissions within a reception area;

c) adjusting the transmission characteristics of each said individual transmitters associated with each machine, providing multiple overlapping transmissions from separate transmitters to a designated reception area;

cd) repeating steps a-b, while

d) ~~providing a service vehicle having product inventory for said vending machines;~~

e) positioning ~~said~~ a service vehicle within said reception area;

f) receiving said ~~updated~~ multiple overlapping transmissions from each of said separate transmitters at said service vehicle within said reception area, providing a multiple received data streams;

g) utilizing said multiple received data streams to pull inventory from said service vehicle ~~pulling inventory from said service vehicle based upon said sales and cash flow data for each vending machine conveyed in said received data stream, providing pulled inventory;~~

h) stocking each said vending machine as needed utilizing said pulled inventory.

13. (Currently amended): The method of Claim 12, wherein after step “h.” there is provided the further step “I.” of resetting each machine at said machine location, so as to reflect the inventory stocked in each machine in step “h.”.

14. (Currently amended): The method of servicing a plurality of vending machines situated at disparate locations relative to one another within a location area, comprising the steps of:

a) polling each said machine, compiling identification, and updated product sales and cash flow data for each machine, providing an updated data stream;

b) repeatedly transmitting said updated data stream utilizing monodirectional RF transmission only, via ~~from said~~ a separate transmitter located near each said machine at predetermined intervals, providing a ~~plurality of updated~~ multiple overlapping transmissions within a reception area;

c) repeating steps a-b, while

d) providing a service vehicle having product inventory for said vending machines;

- e) positioning said service vehicle within said reception area;
- f) receiving said plurality of updated transmissions from each of said separate transmitters, providing a received data stream;
- g) providing sales and cash flow data for each vending machine conveyed in said received data stream, providing a picking ticket;
- h) pulling inventory from said service vehicle based upon said picking ticket, providing pulled inventory;
- fi) stocking each said vending machine as needed utilizing said pulled inventory.

15. (Currently Amended): The method of Claim 14, wherein after step “h.” there is provided the further step “I.” of resetting each said vending machine at said vending machine location, so as to reflect the inventory stocked in each said vending machine in step “h.”.

16. (Currently amended): The method of Claim 15, wherein after step “g.” there is provided the additional step of providing ~~a database of~~ location information on each said vending machine, and discerning an optimal route order for the servicing of each said vending machine, and providing sales and cash flow data for each said vending machine in said optimal route order.

17. (Currently amended): The method of servicing a vending machine, comprising the steps of:

- a) polling said machine, compiling sales and cash flow data, providing a data stream;
- b) repeatedly transmitting said data stream from a transmitter,utilizing monodirectional RF transmission only, providing a ~~plurality of~~ transmissions within a reception

area;

c) repeating steps a-b, while

d) providing a service vehicle having product inventory for said vending machine;

e) positioning said service vehicle within said reception area;

f) receiving said transmission in said reception area, from said transmitter, providing a received data stream, without communicating to said transmitter from said reception area;

g) providing sales and cash flow data for the vending machine, providing a picking ticket;

h) pulling inventory from said service vehicle based upon said picking ticket, providing pulled inventory;

i) stocking said vending machine utilizing said pulled inventory.

18. (Currently amended): The method of Claim 16~~7~~, wherein after step “h i.” there is provided the further step “i.j” of resetting each machine at said machine location, so as to reflect the inventory stocked in each machine in step “h i”.

19. (Currently amended): The method of servicing a vending machine, comprising the steps of:

a) receiving a data stream from the vending machine via a monitoring assembly;

b) removing data from said data stream unrelated to inventory, cash, operational status, or machine ID utilizing programming in said monitoring assembly, providing an abbreviated data stream;

c) preparing a transmission string including an identification of the machine,

inventory, cash data, and/or operational status of said machine from said abbreviated data stream, and forwarding said transmission string to a transmitter module;

d) transmitting, utilizing one-way RF transmission only said transmission string, to broadcast within limited transmission range within a limited, local area, and repeating said transmission to maintain a flow of data to a reception area; while

e) updating said transmission string as new data is received;

f) repeating steps a-e for other vending machines in the vicinity, so as to provide multiple transmissions to the reception area;

g) positioning a service vehicle within the reception area of said transmissions;

h) receiving said transmissions at said service vehicle;

I) inputting said transmissions into a portable computer;

j) conveying said transmissions via said portable computer to a route operator operating the service vehicle;

k) allowing said route operator to pull inventory and money change from said vehicle for servicing each of said vending machines so as to provide stock for filling said vending inventories.

20. (Original): The method of Claim 19, wherein there is further provided the additional step “l.” of said portable computer indicating to the route operator which machine is to be serviced next based upon a calculation as to the best route to follow in servicing said vending machines, providing the next machine.

21. (previously amended): The method of Claim 20, wherein there is further provided

the additional step “m.” of allowing the service personnel to convey said machine inventory to said next machine;

- n) stocking said next machine, replenishing change, and resetting the machine;
- o) repeating steps “l” through “n” until each of said vending machines is stocked;
- p) returning to the service vehicle with the portable computer;
- q) downloading data from the portable computer to a base office.

22. (Currently amended): The method of servicing a vending machine, comprising the steps of:

- a) receiving DEX/USCS data from a vending machine, providing received data;
- b) compiling said data to discern activity on inventory, cash, and/or operational status, providing filtered received data;
- c) preparing a transmission conveying said filtered received data, providing a transmission string;
- d) transmitting, utilizing mono-directional RF transmission only, said transmission string to a reception area in the vicinity of said vending machine;
- e) repeating steps a-d, while
- f) positioning a service vehicle within said reception area;
- g) receiving said transmission;
- h) utilizing data from said transmission to pull inventory and money change from said service vehicle for servicing said vending machine, providing pulled inventory;
- I) conveying said pulled inventory to said vending machine;

j) stocking said vending machine

k) resetting said vending machine, resetting said filtered received data.